



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Adress: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,153	03/07/2006	Willibald Schurz	071308.0685	3418
31625	7590	02/22/2008	EXAMINER	
BAKER BOTTS L.L.P. PATENT DEPARTMENT 98 SAN JACINTO BLVD., SUITE 1500 AUSTIN, TX 78701-4039			ROSENNAU, DEREK JOHN	
		ART UNIT	PAPER NUMBER	
		2834		
		MAIL DATE		DELIVERY MODE
		02/22/2008		PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,153	<b>Applicant(s)</b> SCHURZ ET AL.
	<b>Examiner</b> DEREK J. ROSENAU	<b>Art Unit</b> 2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 25 January 2008.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-19 is/are pending in the application.  
 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-8 and 13-19 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 07 March 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 3/8/06

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_

5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Claims 9-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 25 January 2008.

2. Applicant's election without traverse of the invention of group I in the reply filed on 25 January 2008 is acknowledged.

***Specification***

3. The disclosure is objected to because of the following informalities: in paragraph 5, "This object can be achieved a piezoactuator" is grammatically incorrect.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. First it is unclear if applicant intends to claim that the profiled sheets are fixed or caulked to the fixing points. Second, it is unclear whether applicant intends to claim "the plastic cage" or "a plastic cage".

6. If applicant intends to claim "the plastic cage", there would be insufficient antecedent basis for this limitation in the claim.

Art Unit: 2834

7. Claim 5 and 16 recites the limitations "the first contact surfaces" and "the second contact surfaces". There is insufficient antecedent basis for these limitations in the claims.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-6 and 13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Heinz (US 6794800).

10. With respect to claim 1, Heinz discloses a piezoactuator (Figs 1-8) comprising a piezoceramic (item 1) which can expand when a voltage is applied (column 1, lines 24-27) and contacting elements (item 5) which rest against the piezoceramic (Figs 1-8), wherein the contacting elements are formed as profiled sheets which have contact surfaces spaced at intervals from one another (Figs 1, 3, and 5-8).

11. With respect to claim 2, Heinz discloses a piezoactuator according to claim 1, wherein the profiled sheets are bent (Figs 1, 3, 5, 6, and 8)

12. With respect to claim 3, Heinz discloses a piezoactuator according to claim 1, wherein the profiled sheets are bent such that the contact surfaces press with a predetermined force on the piezoceramic to form an electrical contact (Figs 1, 3, 5, 6, and 8).

13. With respect to claim 4, Heinz discloses a piezoactuator according to claim 1, further comprising a metallization (item 3), against which the contact surfaces rest on the piezoceramic

(Figs 1-8), wherein the contact surfaces are fixed relative to the contact surfaces of the metallization in such a way that, when the piezoceramic is axially deflected, no frictional relative movement occurs between contact surfaces and metallization (Figs 1-8).

14. With respect to claim 5, Heinz discloses a piezoactuator according to claim 1, wherein the contact surfaces are formed in such a way that the first contact surfaces form a first contact track and the second contact surfaces form a second contact track (Figs 1, 3, and 5-8)

15. With respect to claim 6, Heinz discloses a piezoactuator according to claim 5, wherein the contact surfaces of the two contact tracks extend in the longitudinal direction of the piezoceramic (Figs 1, 3, and 5-8).

16. With respect to claim 13, Heinz discloses a piezoactuator according to claim 4, wherein the metallization is running laterally along the piezoelectric longitudinal axis (Figs 1, 3, and 5-8).

17. With respect to claim 14, the subject matter therein corresponds to that of claims 1-3; therefore, claim 14 is anticipated by Heinz as in claims 1-3 above.

18. With respect to claims 15-17, the subject matter therein corresponds to that of claims 4-6; therefore, claims 15-17 are anticipated by Heinz as in claims 4-6 above.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz in view of Schurz et al. (US 7259504) and Schuh et al. (US 6316863).

21. With respect to claims 7 and 18, Heinz discloses a piezoactuator according to claims 1 and 14, respectively.

Heinz does not disclose expressly that the profiled sheets are fixed to an external surface of a plastic cage and the piezoceramic is positioned in a cavity of the plastic cage.

Schuh et al. teaches a piezoactuator in which the piezoceramic is positioned in a cavity (Fig 8) of a plastic cage (column 5, line 66 through column 6, line 11).

Schurz et al. teaches a piezoactuator (Figs 3 and 5) in which profiled sheets (item 6) are fixed to an external surface (Fig 3) of a cage material (item 14) formed around the piezoceramic (Fig 5).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the plastic cage of Schuh et al. and the externally connected profiled sheets of Schurz et al. with the piezoactuator of Heinz for the benefits of better protecting the piezoceramic from damage (column 5, line 66 through column 6, line 11 of Schuh et al.) and reducing the amount of space required for the device (column 4, lines 14-16 of Schurz et al.).

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEREK J. ROSENAU whose telephone number is (571)272-8932. The examiner can normally be reached on Monday thru Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Derek J Rosenau  
Examiner  
Art Unit 2834

/D. J. R./  
Examiner, Art Unit 2834

/Darren Schuberg/  
Supervisory Patent Examiner, Art Unit 2834